PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents
United States Patent and Trademark Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 02 May 2000 (02.05.00)	
International application No. PCT/US99/19436	**Applicant's or agent's file reference** X-12239
International filing date (day/month/year) 30 August 1999 (30.08.99)	**Priority date** (day/month/year) 01 September 1998 (01.09.98)
Applicant EDMONDS, Brian, Taylor	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International Preliminary Examining Authority on:

03 March 2000 (03.03.00)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740 14 35

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Pascal Piriou

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09/763994

15

PATENT COOPERATION TREATY

REC'D 22 DEC 2000

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference X-12239	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US99/19436	International filing date *(day/month/year)* 30 AUGUST 1999	Priority date *(day/month/year)* 01 SEPTEMBER 1998
International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet.		
Applicant ELI LILLY AND COMPANY		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items.

- I [X] Basis of the report
- II [ ] Priority
- III [X] Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV [ ] Lack of unity of invention
- V [X] Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI [ ] Certain documents cited
- VII [ ] Certain defects in the international application
- VIII [ ] Certain observations on the international application

Date of submission of the demand	Date of completion of this report
03 MARCH 2000	21 NOVEMBER 2000
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer Dorothea Laurence for DAVID S. ROMEO Telephone No. (703) 308-0196

Form PCT/IPEA/409 (cover sheet) (July 1998)★

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/19436

I. Basis of the report

1. With regard to the **elements** of the international application:*

[X] the international application as originally filed

[X] the description:
pages 1-51 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

[X] the claims:
pages 52-57 , as originally filed
pages NONE , as amended (together with any statement) under Article 19
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

[X] the drawings:
pages NONE , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

[X] the sequence listing part of the description:
pages 1-15 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

[ ] the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

[ ] the language of publication of the international application (under Rule 48.3(b)).

[ ] the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

[X] contained in the international application in printed form.

[X] filed together with the international application in computer readable form.

[ ] furnished subsequently to this Authority in written form.

[ ] furnished subsequently to this Authority in computer readable form.

[ ] The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

[ ] The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. [X] The amendments have resulted in the cancellation of:

[X] the description, pages NONE

[X] the claims, Nos. NONE

[X] the drawings, sheets/~~Fig~~ NONE

5. [ ] This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)) **

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

*** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/19436

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been and will not be examined in respect of:

☐ the entire international application.

☒ claims Nos. 8, 9, 13, 15-31

because:

☐ the said international application, or the said claim Nos. _ relate to the following subject matter which does not require international preliminary examination *(specify)*.

☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. _ are so unclear that no meaningful opinion could be formed *(specify)*.

☐ the claims, or said claims Nos _ are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 13, 15-31.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/19436

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. statement

Novelty (N)	Claims	1-3, 5-7, 10-12, 14	YES
	Claims	4	NO
Inventive Step (IS)	Claims	NONE	YES
	Claims	1-7, 10-12, 14	NO
Industrial Applicability (IA)	Claims	1-7, 10-12, 14	YES
	Claims	NONE	NO

2. citations and explanations (Rule 70.7)

Claims 1-3, 5-7, 10-12, 14 meet the criteria set out in PCT Article 33(2), because a single prior art reference does not teach or fairly suggest the claimed polypeptides or polynucleotides.

Claims 1-7, 10-12, 14 meet the criteria set out in PCT Article 33(2)and(4), because the claimed polypeptides or polynucleotides have utility in the biotechnology industry.

Claim 4 lacks novelty under PCT Article 33(2) as being anticipated by Database GenBank Accession No. AF011407. Database GenBank Accession No. AF011407 teaches an isolated nucleic acid molecule that hybridizes under stringent conditions to the complement of SEQ ID NO:1.

Claims 1-7, 10-12, 14 lack an inventive step under PCT Article 33(3) as being obvious over YIN in view of Database GenBank Accession No. AAB64201 and Database GenBank Accession No. AF011407. YIN teaches the cloning of a mouse LTBP-3 precursor (page 10149, column 1, full paragraph 1). YIN's mouse LTBP-3 cDNA is 86.5% identical at the nucleotide level to SEQ ID NO: 1 of the instant invention. The predicted polypeptide is 87.5% identical at the amino acid level to SEQ ID NO:2 of the instant invention. YIN also teaches vectors comprising the mouse LTBP-3 cDNA, host cells comprising the vector, a method of producing the encoded polypeptide, and the isolated polypeptide (page 10148, column 2, full paragraphs 3-5; page 10158, Figure 7). YIN also teach isolation of fragments of the human LTBP-3 gene and the coding sequence thereof (paragraph bridging pages 10157-10158). YIN also teaches it will be important to determine if LTBP-3 binds calcium and other molecules (page 10159, full paragraph 2). YIN is silent with respect to the amino acid and nucleotide sequence of the human LTBP-3. However, it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to clone the human LTBP-3 cDNA with a reasonable expectation of success, using techniques such as those used by LIN for the cloning of the mouse LTBP-3 cDNA. One of ordinary skill in (Continued on Supplemental Sheet.)

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

CLASSIFICATION:

The International Patent Classification (IPC) and/or the National classification are as listed below:
IPC(7): C07K 14/47; C07H 21/04; C12N 1/21, 15/00; C12P 21/00 and US Cl.: 530/350; 536/23.5; 435/7.1, 69.1, 252.3, 320.1

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):
the art would be motivated to clone the human LTBP-3 cDNA for the recombinant production of the encoded human LTBP-3 polypeptide or analysis of expression of the human LTBP-3 mRNA in tissues. It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to recombinantly express the encoded human LTBP-3 polypeptide with a reasonable expectation of success, using techniques such as those used by LIN for the recombinant expression of the mouse LTBP-3 polypeptide. One of ordinary skill in the art would be motivated to express the human LTBP-3 polypeptide recombinantly because the supply of many eukaryotic proteins which have potential clinical or industrial use is often limited by their low natural availability; gene cloning and expression in (*E. coli*, bacteria, yeast, etc.) would provide a more abundant source of the human LTBP-3 polypeptide. Recombinant expression would provide a convenient source of readily purified protein. The human LTBP-3 polypeptide comprises at least 20 contiguous amino acids of the instantly disclosed SEQ ID NO:2, as evidenced by Database GenBank Accession No. AAB64201. The human LTBP-3 cDNA can hybridize to the instantly disclosed SEQ ID NO:1, as evidenced by Database GenBank Accession No. AF011407. It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to test for the binding of the human LTBP-3 polypeptide to calcium or other compounds because YIN suggests that importance of doing so.

---------- NEW CITATIONS ----------

NONE

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/19436

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :C07K 14/47, C07H 21/04, C12N 1/21, 15/00, C12P 21/00

US CL :530/350; 536/23.5, 435/7.1, 69.1, 252.3, 320.1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 530/350; 536/23.5, 435/7.1, 69.1, 252.3, 320.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST, CAPLUS
search terms: latent TGF-beta binding protein, LTBP

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	YIN et al. Isolation of a novel latent transforming growth factor beta-binding protein (LTBP-3). J. Biol. Chem. 28 April 1995, Vol. 270, No. 17, pages 10147-10160, especially page 10148, col. 1, full paragraph 1; paragraph bridging pages 10157-10158; page 10159, col. 2, last paragraph.	1-7, 10-12, 14
Y	GONG et al. Isoforms and splice variant of transforming growth factor beta-binding protein in rat hepatic stellate cells. Gastroenterology. February 1998, Vol. 114, No. 2, pages 352-363, especially page 352, paragraph bridging columns 1-2; page 353, col. 1, full paragraph 1; page 357, paragraph bridging columns 1-2.	1-7, 10-12, 14

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex

*	Special categories of cited documents	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search	Date of mailing of the international search report
25 JANUARY 2000	11 FEB 2000
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer DAVID S. ROMEO Telephone No. (703) 308-0196

Form PCT/ISA/210 (second sheet)(July 1992)*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/19436

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Database GenBank, US National Center for Biotechnology Information, (Bethesda, MD, USA), Accession No. AF011407, MICHEL et al. 'Analysis of the expression pattern of the latent TGF-beta binding protein (LTBP) isoforms in normal and diseased human liver reveals a new splice variant missing part of the proteinase sensitive hinge region', 28 July 1997.	1-7, 10-12, 14
Y	Database GenBank, US National Center for Biotechnology Information, (Bethesda, MD, USA), Accession No. AAB64201, MICHEL et al. 'Analysis of the expression pattern of the latent TGF-beta binding protein (LTBP) isoforms in normal and diseased human liver reveals a new splice variant missing part of the proteinase sensitive hinge region', 28 July 1997.	1-7, 10-12, 14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/19436

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3 ☒ Claims Nos.: 8-9
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Extra Sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-7, 10-12

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/19436

BOX II OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING
This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I, claim(s) 1-12, 14, drawn to human LTBP-3 polypeptides and polynucleotides.
Group II, claim(s) 13, 17, drawn to an antibody that binds a human LTBP-3.
Group III, claim(s) 15, 16, 18-20, 25, drawn to a method of administering a human LTBP-3 polypeptide to a patient.
Group IV, claim(s) 21, drawn to a method of administering a compound that binds a human LTBP-3 polypeptide to a patient.
Group V, claim(s) 22-24, 26-28, to the extent that they are drawn to a method of modulating the expression of a human LTBP-3 polynucleotide.
Group VI, claim(s) 22-24, 26-28, to the extent that they are drawn to a method of modulating the activity of a human LTBP-3 polynucleotide.
Group VII, claim(s) 29-31, to the extent that they are drawn to a method of manufacturing a medicament comprising a compound that modulates the expression of a human LTBP-3 polynucleotide
Group VIII, claim(s) 29-31, to the extent that they are drawn to a method of manufacturing a medicament comprising a compound that modulates the activity of a human LTBP-3 polynucleotide.

The inventions listed as Groups I-VIII do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons

The special technical feature of the main invention, Group I, is a human LTBP-3 polypeptide. In order for unity of invention to be present the claims must define a special technical feature that makes a contribution over the prior art. However, YIN et al. teach the existence of the human LTBP-3 gene and the isolation of fragments thereof. See the paragraph bridging pages 10157-10158. The human LTBP-3 polypeptide comprises at least 20 contiguous amino acids of SEQ ID NO:2, as recited in claim 1, as evidenced by GenBank database entry accession no. 015107. Accordingly, group I does not fulfill the requirements of unity of invention with respect to a human LTBP-3 polypeptide. Any of groups II-VIII do not share a special technical feature with group I because group I does not have a special technical feature.

Pursuant to 37 CFR 1.475(d), this authority considers that where multiple products and processes are claimed, the first recited product, method of making that product, and method of using that product, together with the first recited of each of the other inventions related thereto, shall constitute the main invention. Further, it considers that any subsequently recited products and/or methods constitute separate groups. Accordingly, groups II-VIII constitute separate groups.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/18184

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :C07K 14/47; C07H 21/04; C12N 15/63, 1/21; C12P 21/02
US CL : 530/350; 536/ 23.5; 435/320.1, 252.3, 69.1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 530/350; 536/ 23.5; 435/320.1, 252.3, 69.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y -- A	CHRETIEN et al. CTX, a Xenopus thymocyte receptor, defines a molecular family conserved throughout vertebrates. Eur. J. Immunol. 1998, Vol. 28, pages 4094-4104, especially the nucleic and amino acid sequences, and the attached sequence alignment which shows a 100% identical match to amino acids 21-100 of SEQ ID NO:2.	1, 3-5, 8, 12 ----- 6, 7, 10 ----- 2, 9
X -- Y -- A	Sequence Database EST, National Cancer Institute, Cancer Genome Anatomy Project (CGAP), Tumor Gene Index, AN AI478852. 'tm24f09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2157545 3' similar to TR:Q91665 CTX;, mRNA sequence'.	1, 3-5, 8 ---- 6, 7, 10, 12 ---- 2, 9

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 31 AUGUST 2000	Date of mailing of the international search report 22 SEP 2000
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer EILEEN B. O'HARA Telephone No. (703) 308-0196

Form PCT/ISA/210 (second sheet) (July 1998)*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/18184

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Extra Sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-10 and 12

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/18184

B. FIELDS SEARCHED
Electronic data bases consulted (Name of data base and where practicable terms used):

Commercial Sequence Databases: GenEmbl, N_Geneseq_36, Issued_Patents_NA, EST, A_Geneseq_36, Issued_Patents_AA, PIR_64, SwissProt_38STREMBL_12
Sequences searched: SEQ ID NOS: 1, 2 and 3

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING
This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I, claim(s) 1-10 and 12, in so far as they are drawn to Tango 244, polynucleotides of SEQ ID NOS: 1 and 3, vector, host cell, method of producing a protein recombinantly and protein of SEQ ID NO:2.
Groups II-V, claim(s) 1-10 and 12, in so far as they are drawn to the next four polynucleotides of distinct cDNA clones and encoded proteins, identified as Tango 246, Tango 275, Tango 300 and human and monkey Mango 245.
Groups VI-X, claims 11 and 15, in so far as they are drawn to antibodies to one of the five proteins listed above.
Groups XI-XV, claims 13, 14, 19, 20 and 22, in so far as they are drawn to a method for detecting the presence of in a sample or identifying a compound which binds to or modulates the activity of a polypeptide of one of the five proteins listed above.
Groups XVI-XX, claims 16 and 17, in so far as they are drawn to a method for detecting the nucleic acids of one of the five cDNA clones listed above.
Groups XXI-XXV, claim 18, in so far as it is drawn to a kit comprising a compound of unspecified constitution which selectively binds to a nucleic acid molecule of the five cDNA clones listed above.
Groups XXVI-XXX, claim 21, in so far as it is drawn to a method for modulating the activity of one of the five proteins listed above.

The inventions listed as Groups I-XXX do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group I corresponds to the first invention wherein the first product is the polynucleotide and the first method of using is the method of making the protein. Note that there is no method of making the polynucleotide. The invention also includes the protein made. Each of groups II-V does not share the same or corresponding special technical feature because each group is drawn to a different polynucleotide and encoded protein, and each of groups VI-XXX does not share the same or corresponding special technical feature because each group is drawn to different compounds or methods of using the five polynucleotides and encoded proteins. This Authority therefore considers that the several inventions do not share a special technical feature within the meaning of PCT Rule 13.2 and thus do not relate to a single general inventive concept within the meaning of PCT Rule 13.1.